APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,175	11/29/2001	Aedan Diarmuid Cailean Coffey	ERLGP031	7978

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EXAMINER
CLEARY, THOMAS J

ART UNIT	PAPER NUMBER
2111	

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DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/683,175	Applicant(s) COFFEY, AEDAN DIARMUID CAILEAN
	Examiner Thomas J. Cleary	Art Unit 2111

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-12</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-12</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>29 November 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☒ None of:
        1.☒ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____ .
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____ .

DETAILED ACTION

Priority

1.   Acknowledgment is made of Applicant's claim for foreign priority based on an

application filed in Ireland on 8 March 2001. It is noted, however, that Applicant has not

filed a certified copy of the S2001/0224 application as required by 35 U.S.C. 119(b).

2.   Acknowledgment is made of Applicant's claim for foreign priority based on an

application filed in Ireland on 27 June 2001. It is noted, however, that Applicant has not

filed a certified copy of the S2001/0611 application as required by 35 U.S.C. 119(b).

Specification

3.   The disclosure is objected to because of the following informalities: On Line 3 of

Paragraph 10, -processor"s- should be replaced by -processor's-. Appropriate

correction is required.

4.   The disclosure is objected to because it contains an embedded hyperlink and/or

other form of browser-executable code in Paragraph 7. Applicant is required to delete

the embedded hyperlink and/or other form of browser-executable code. See MPEP §

608.01.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed
> publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6.   Claims 1, 2, and 12 are rejected under 35 U.S.C. 102(a) as being anticipated by

US Patent Number 6,199,105 to Soejima et al. ("Soejima").

7.   In reference to Claim 1, Soejima teaches a lock management apparatus

comprising: means for receiving from a processor associated with said lock

management apparatus an indicator of a resource to be locked (See Figure 2 Number

(1) and Column 9 Lines 20-26); means for causing a corresponding indicator to be

stored (See Figure 2 Number (2) and Column 9 Lines 26-33); means for causing said

stored indicator to be deleted when an associated resource is unlocked (See Figure 4

Number (2a) and Column 9 Line 61 – Column 10 Line 4); means for receiving from a

network a frame indicative of a lock request for a resource (See Figure 3 Number (1)

and Column 9 Lines 39-44); means, responsive to receiving a lock request frame

originating from another processor, for checking any stored indicators for a matching

locked resource (See Column 9 Lines 44-46); means, responsive to detecting a match,

for transmitting a frame indicative of said resource being locked by said processor to the

originator of said lock request (See Figure 3 Number (3) and Column 9 Lines 44-51);

and means, responsive to not detecting a match, for transmitting said lock request

frame to the originator of said lock request (See Figure 2 Number (3) and Column 9

Lines 27-38).

8.   In reference to Claim 2, Soejima teaches means for receiving from said

processor associated with said lock management apparatus a provisional indicator of a

resource to be locked (See Figure 3 Number (1) and Column 9 Lines 39-47); and

wherein said storing means stores an indicator corresponding to said provisional

indicator (See Figure 3 Number (2) and Column 9 Lines 47-51).

9.   In reference to Claim 12, Soejima teaches a method for managing locks

comprising: receiving from an associated processor an indicator of a resource to be

locked (See Figure 2 Number (1) and Column 9 Lines 20-26); causing a corresponding

indicator to be stored (See Figure 2 Number (2) and Column 9 Lines 26-33); causing

said stored indicator to be deleted when an associated resource is unlocked (See

Figure 4 Number (2a) and Column 9 Line 61 – Column 10 Line 4); receiving from a

network a frame indicative of a lock request for a resource (See Figure 3 Number (1)

and Column 9 Lines 39-44); responsive to receiving a lock request frame originating

from another processor, checking any stored indicators for a matching locked resource

(See Column 9 Lines 44-46); responsive to detecting a match, transmitting a frame

indicative of said resource being locked by said processor to the originator of said lock

request (See Figure 3 Number (3) and Column 9 Lines 44-51); and responsive to not

detecting a match, transmitting said lock request frame to the originator of said lock

request (See Figure 2 Number (3) and Column 9 Lines 27-38).

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

11.   Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Soejima

as applied to Claim 1 above, and further in view of US Patent Number 6,148,414 to

Brown et al. ("Brown").

12.   In reference to Claim 3, Soejima teaches the limitations as applied to Claim 1

above. Soejima does not teach means for receiving from said processor associated

with said lock management apparatus a check to determine if a resource is locked by

said processor; and means for indicating to said associated processor if said resource is

locked. Brown teaches receiving from said processor associated with said lock

management apparatus a check to determine if a resource is locked by said processor

(See Figure 9 Number 120 and Column 9 Lines 51-54). The device of Brown will

inherently indicate to said associated processor if said resource is locked.

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the device of Soejima with the lock checking of Brown,

resulting in the invention of Claim 3, in order to determine if the system needs to

arbitrate for control of the resource and to cut overhead by not releasing the lock until

another processor requests it (See Column 9 Lines 54-63 of Brown).

13.   Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Soejima as applied to Claim 1 above, and further in view of US Patent Number

6,173,311 to Hassett et al. ("Hassett").

14.   In reference to Claim 4, Soejima teaches the limitations as applied to Claim 1

above. Soejima does not teach that the associated processor controls a network server

in one of a redundant pair of servers. Hassett teaches the use of a processor controlled

network server that has a redundant server (See Figure 1 and Column 5 Lines 33-39).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the device of Soejima with the redundant network

servers of Hassett, resulting in the invention of Claim 4, in order to allow the hosts to

distribute data to client machines efficiently while ensuring that the failure of any one

host does not result in a termination of services to the clients (See Column 5 Lines 33-39 of Hassett).

15.   In reference to Claim 5, Soejima and Hassett teach the limitations as applied to Claim 4 above. Soejima further teaches means for receiving from the network a frame from the other of said pair of redundant servers including an indicator of a resource to be locked (See Figure 3 Number (1) and Column 9 Lines 39-44); means for causing a corresponding indicator to be stored (See Figure 4 Number (2b) and Column 10 Lines 10-21); and means for causing said stored indicator to be deleted when an associated resource is unlocked (See Figure 4 Number (2a) and Column 9 Line 61 – Column 10 Line 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the device of Soejima with the redundant network servers of Hassett, resulting in the invention of Claim 5, in order to allow the hosts to distribute data to client machines efficiently while ensuring that the failure of any one host does not result in a termination of services to the clients (See Column 5 Lines 33-39 of Hassett).

16.   In reference to Claim 4, Soejima teaches the limitations as applied to Claim 1 above. Hassett teaches the use of a processor controlled network server that has a redundant server (See Figure 1 and Column 5 Lines 33-39). Because the processor of Soejima is inherently on a motherboard, the associated lock management apparatus

would therefore be one of a separate component of the motherboard or an integral element of the motherboard.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the device of Soejima with the redundant network servers of Hassett, resulting in the invention of Claim 6, in order to allow the hosts to distribute data to client machines efficiently while ensuring that the failure of any one host does not result in a termination of services to the clients (See Column 5 Lines 33-39 of Hassett).

17.   Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Soejima as applied to Claim 1 above, and further in view of US Patent Number 5,999,435 to Henderson et al. ("Henderson").

18.   In reference to Claim 7, Soejima teaches the limitations as applied to Claim 1 above. Soejima does not teach that said indicators are stored in a content addressable memory (CAM). Henderson teaches the use of content addressable memory (See Column 1 Lines 5-31).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the device of Soejima with the content addressable memory of Henderson, resulting in the invention of Claim 7, because content addressable memories are well known and allow the contents of the memory to be

searched and matched which can accelerate any application requiring fast searches

(See Column 1 Lines 9-22 of Henderson), such as the device of Soejima.

19.   Claim 8, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Soejima and Henderson as applied to Claim 7 above, and further in view of US

Patent Number 5,991,891 to Hahn et al. ("Hahn").

20.   In reference to Claim 8, Soejima and Henderson teach the limitations as applied

to Claim 7 above. Soejima and Henderson do not teach that said network is a fibre

channel arbitrated loop (FC-AL). Hahn teaches the use of a fibre channel arbitrated

loop (See Column 1 Line 37 – Column 2 Line 15).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the device of Soejima and Henderson with the fibre

channel arbitrated loop of Hahn, resulting in the invention of Claim 8, because FC-AL

supports 127 node addressability, 10 km cabling ranges, gigabit bandwidths, and offers

the highest overall performance and distance of any serial interface (See Column 1

Lines 52-64 of Hahn).

21.   In reference to Claim 9, Soejima, Henderson, and Hahn teach the limitations as

applied to Claim 8 above. Hahn further teaches that said transmitting means are

adapted to transmit frames to the originator of a lock request via any nodes in said loop

between said lock management apparatus and said originator (See Figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the device of Soejima and Henderson with the fibre channel arbitrated loop of Hahn, resulting in the invention of Claim 9, because FC-AL supports 127 node addressability, 10 km cabling ranges, gigabit bandwidths, and offers the highest overall performance and distance of any serial interface (See Column 1 Lines 52-64 of Hahn).

22.   In reference to Claim 10, Soejima, Henderson, and Hahn teach the limitations as applied to Claim 9 above. Soejima further teaches that said originator is one of another server or another lock management apparatus associated with another server (See Figure 3 Number (1) and Column 9 Lines 39-44).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the device of Soejima and Henderson with the fibre channel arbitrated loop of Hahn, resulting in the invention of Claim 10, because FC-AL supports 127 node addressability, 10 km cabling ranges, gigabit bandwidths, and offers the highest overall performance and distance of any serial interface (See Column 1 Lines 52-64 of Hahn).

23.   Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Soejima and Henderson as applied to Claim 10 above, and further in view of US Patent Number 6,446,141 to Nolan et al. ("Nolan").

24.   In reference to Claim 11, Soejima, Henderson, and Hahn teach the limitations as

applied to Claim 10 above. Soejima, Henderson, and Hahn do not teach that said CAM

is associated with a pair of lock management apparatus, each of which is adapted to

receive and transmit frames on a respective one of two redundant loops comprising said

FC-AL. Nolan teaches two controllers, which are equivalent to the lock management

apparatuses, that are adapted to receive and transmit data on a respective one of two

redundant loops comprising an FC-AL (See Figure 2 and Column 11 Line 64 – Column
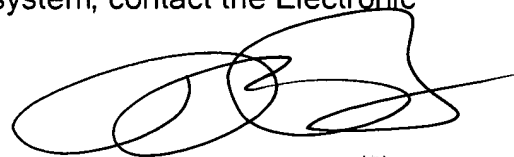
12 Line 6).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the device of Soejima, Henderson, and Hahn with the

pair of devices on redundant loops of Nolan, resulting in the invention of Claim 11, in

order to improve fault tolerance by providing redundant controllers and connections to

the connected devices (See Column 11 Line 66 – Column 12 Line 2 of Nolan).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Cleary whose telephone number is 703-305-5824. The examiner can normally be reached on Monday-Thursday (7-4), Alt. Fridays (7-3).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H. Rinehart can be reached on 703-305-4815. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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